The Safe Drinking Water Act and Perchlorate

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Contaminant Identification and Selection Under the SDWA

- **Contaminant Selection Under the 1986 Amendments to SDWA:**
  - ⇨ Regulate 83 contaminants by 1989;
  - ⇨ Regulate 25 contaminants every 3 years.
- **Congress, EPA had Implementation Concerns:**
  - ⇨ Missed statutory deadlines;
  - ⇨ Water systems encountered difficulty in timely compliance;
  - ⇨ Focus on sound science and contaminants posing greatest risk.

Contaminant Identification and Selection Under the SDWA

- **Contaminant Selection Under the 1996 Amendments to SDWA.**
  - ⇨ Publish a Contaminant Candidate List (CCL) of contaminants known or anticipated to occur in DW and not subject to NPDWRs by Feb 1998.
  - ⇨ Broad consultation with stakeholders, NDWAC, and SAB.

Contaminant Identification and Selection under the SDWA

- **Draft CCL Published on Oct 6, 1997.**
  - ⇨ Did not include perchlorate, but sought comment on whether to include it on the final CCL.
  - ⇨ Public comments indicated overall support for adding perchlorate to the CCL.

- **Final CCL published on March 2, 1998.**
  - ⇨ Contains 50 chemical and 10 microbiological contaminants.

Contaminant Candidate List (CCL)

- **Functions of the CCL:**
  - ⇨ Make determinations for at least 5 contaminants of whether or not to regulate with a NPDWR by 2001.
  - ⇨ Focus and prioritize research agenda for contaminants with data gaps.
  - ⇨ Source for selection of contaminants for unregulated contaminant monitoring regulation (UCMR) due in 1999.

Perchlorate and the CCL

- **Two categories of contaminants on the CCL:**
  - ⇨ (1) Regulatory Determination Priorities;
  - ⇨ (2) Research Priorities.
- **Perchlorate falls into the research priorities category due to extensive data gaps in:**
  - ⇨ Occurrence; health effects, treatment technologies, and analytical methods research.

Regulatory and Policy Agenda for Perchlorate

- **Determination to regulate not likely by 2001.**
  - ⇨ Extensive data gaps in all areas.
- **EPA is not currently planning to include perchlorate as a contaminant in the proposed UCMR (Fall 1998).**
  - ⇨ Lack of EPA approved analytical method(s).
  - ⇨ Recommend near-term special occurrence studies.

Next Steps for Perchlorate

- **Perchlorate is a research and occurrence priority for the OGWDW.**
  - ⇨ In process of developing short and longer term research plans on health, treatment, and analytical methods.
- **OGWDW is very engaged in the IPSC.**
  - ⇨ Ensure exchange of scientific information to support decision making based on sound science and stakeholder involvement.

Next Steps for Perchlorate

- **Possible Scenarios:**

(1) Longer Term (3 to 5 years):

⇨ Data gaps filled and perchlorate moves to the regulatory determination priority category of next CCL -- due in 2003.

(2) Near Term (1-2 years):

⇨ If health effects and occurrence data warrant, develop a Health Advisory.

EPA Health Advisory Program

- **SDWA General Authority:**
  - ⇨ "The Administrator may publish health advisories (HA), which are not regulations, or take other appropriate actions for contaminants not subject to any national primary drinking water regulation."

- **HAs represent concentrations of contaminant in drinking water which adverse health effects are not expected to occur.**

EPA Health Advisory Program

- **Not federally enforceable.**
- **Subject to change as new information becomes available.**
- **Can serve as technical guidance to assist State, Tribal, and local officials responsible for protection of public health.**

EPA Health Advisory Program

- **HAs used in emergency situations and describe concentrations of a contaminant at which adverse non-carcinogenic effects are not anticipated to occur following exposures:**
  - 1-day
  - 10-day :
  - Longer term (i.e. 7 years)
  - Lifetime

Sample HA Calculations

- **Determine RfD in mg/kg/day.**
- **Determine DWEL (Drinking Water Equivalent Level) in mg/L, assuming 100% drinking water contribution.**
- **Determine HA in mg/L.**

Sample HA Calculations

- DWEL (mg/L) = $\frac{(\text{RfD})(70\text{ kg adult})}{(2\text{ L/day})}$*

  DWEL (mg/L) = $\frac{(\text{RfD})(10\text{ kg child})}{(1\text{ L/day})}$**

* *for lifetime HA*

** *for 1 day, 10 day, and longer term HA*

- HA (mg/L) = (DWEL)(% DW contribution)